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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/709,374	04/30/2004	Ting-Jui Chang	10657-US-PA	3373
31561	7590	10/05/2005	EXAMINER	
JIANQ CHYUN INTELLECTUAL PROPERTY OFFICE 7 FLOOR-1, NO. 100 ROOSEVELT ROAD, SECTION 2 TAIPEI, 100 TAIWAN			CHEN, LUCY P	
			ART UNIT	PAPER NUMBER
			2871	

DATE MAILED: 10/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/709,374	Applicant(s) CHANG, TING-JUI	
	Examiner Lucy P. Chien	Art Unit 2871	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) 2-5,8,9 and 12-14 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1,6,7,10 and 11 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

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DETAILED ACTION

Election/Restriction

Applicant's election without traverse of Specie I, directed to claims 1,6,7,10 and 11, drawn to the specifics being layers ordered from Top to Bottom: Analyzer plate, 2nd quarter wave plate, 2nd biaxial compensation layer, liquid crystal, 1st biaxial compensation film, 1st uniaxial quarter plate, and then the polarizer plate as disclosed in Figure 2. Figure 3 discloses the axial orientation angle of Figure 2, described as embodiment I readable thereon in the reply filed on Sept 21, 2005 is acknowledged.

Claim 2-5,8,9, and 12-14 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species.

Examiner will examine Claims 1,6,7,10 and 11.

Claim Rejections - 35 USC § 102

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claim 1 is rejected under 35 U.S.C. 102(e) as being anticipated by Koyama et al (US 6801283).

Koyama et al discloses (Figure 3) a back light unit (7), an optical compensation circular polarizer unit (12) set over the back light unit (7), an optically self-compensated birefringence liquid crystal panel (23) set over the optical compensation circular

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polarizer unit (12), and an optical compensation circular analyzer (11) set over the liquid crystal panel (23).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Koyama et al (US 6801283) in view of Konno et al (US 20030016325).

Koyama et al discloses a polarizer plate (4), a first uniaxial quarter-wave plate (3) sandwiched between the polarizer plate (4) and the liquid crystal panel (23), where the optical axis of the first uniaxial quarter-wave plate (5) and an absorption axis of the polarizer plate (4) form an included angle of about 45 degrees (Column 4, Row 40-55).

Koyama et al does not disclose the use of a biaxial compensation film.

Konno et al discloses (Figure 5) a first biaxial compensation film (405) sandwiched between the first uniaxial quarter-wave plate (409) and the liquid crystal panel (401). The liquid crystal layer has a bend alignment and its compensated by the biaxial birefringence plate resulting in an intensity of light being maximized thus producing an image with high visibility with a very wide viewing angle. (Page 7, [0105-0109])

It would have been obvious to one skilled in the art to modify Koyama et al's display to include Konno et al's biaxial film motivated by the desire to producing an image with high visibility with a very wide viewing angle. (Page 7, [0105-0109])

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Koyama et al (US 6801283) and of Konno et al (US 20030016325) in view of Shimoshikiryou et al (20020033923)

Koyama et al does not disclose discloses the angle between the polarizer plate and the liquid crystal panel.

Konno et al discloses (Figure 5) an analyzer plate (406), where the absorption axis of the analyzer plate is perpendicular to the absorption axis of the polarizer plate (407), and the polarizer plate (axis same as LC panel as shown in Figure 5) form an included angle of 45 degrees which is between 40 degrees to 50 degrees with the alignment direction of the liquid crystal panel (Column 4, Row 40-55)(also shown in Figure 5), a second uniaxial quarter-wave plate (408) sandwiched between the analyzer plate (406) and the liquid crystal panel (401), where the optical axis of the second uniaxial quarter-wave plate forms an included angle of about 45 degrees with the absorption axis of the analyzer plate.

Koyama et al and Konno et al do not disclose a second biaxial compensation film sandwiched between the second uniaxial quarter-wave plate and the liquid crystal panel.

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Shimoshikiryu et al discloses that by providing the biaxial birefringence on both sides of the display the retardation changes as the viewing angle is changed in the left-right direction of the pixel.

It would have been obvious to one skilled in the art to include a second biaxial compensation film to producing an image with high visibility with a very wide viewing angle. (Page 7, [0105-0109])

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Koyama et al (US 6801283) and of Konno et al (US 20030016325) in view of Yano et al (US 20020034596).

Koyama et al and Konno et al do not disclose that the biaxial compensation film has satisfy the following inequality relations: $n_x > n_y > n_z$ and $(n_x - n_z)/(n_x - n_y) > 6$.

Yano et al discloses (abstract) The biaxial compensation film has principal refractive indices n_x, n_y , and n_z that satisfy the following inequality relations: $n_x > n_y > n_z$ and $(n_x - n_z)/(n_x - n_y) > 6$, and the principal axis with the refractive index n_x is perpendicular to the alignment direction of the liquid crystal panel.

It would have been obvious to one skilled in the art to modify Koyama et al's display and Konno et al's biaxial film to include Yano et al's refractive indices ranges of a retardation film by which the light between the polarizers can be cut off at wide ranging angles so that a good display quality liquid crystal display device with excellent viewing angles and contrast can be obtained. (Page 1, [0002]).

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Koyama et al (US 6801283) and of Konno et al (US 20030016325) and of Shimoshikiryu et al (20020033923) in view of Yano et al (US 20020063819).

Koyama et al, Konno et al, and Shimoshikiryu et al do not disclose that the biaxial compensation film has satisfy the following inequality relations: $n_x > n_y > n_z$ and $4 > (n_x - n_z) / (n_x - n_y) > 2$.

Yano et al discloses a biaxial compensation film has principal refractive indices n_x' , n_y' and n_z' that satisfy the following inequality relations: $n_x' > n_y' > n_z'$ and $(n_x' - n_z') / (n_x' - n_y')$ is preferably 2 to 3 which overlaps the range of $4 > (n_x' - n_z') / (n_x' - n_y') > 2$, and the principal axis with the refractive index n_x' is perpendicular to the alignment direction of the liquid crystal panel. (Page 2, [0015]).

It would have been obvious to one skilled in the art to modify Koyama et al's display and Konno et al's biaxial film and Shimoshikiryu et al's second biaxial film to include Yano et al's refractive indices ranges of a retardation film by which the light between the polarizers can be cut off at wide ranging angles so that a good display quality liquid crystal display device with excellent viewing angles and contrast can be obtained. (Page 1, [0002]).

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Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lucy P. Chien whose telephone number is 571-272-8579. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Kim can be reached on (571)272-2293. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Lucy Chien
Examiner
Art Unit 2871
LC




ANDREW SCHECHTER
PRIMARY EXAMINER